

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES 1 16	
2. AMENDMENT/MODIFICATION NO. 0001		3. EFFECTIVE DATE 07-Nov-2008		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO.(If applicable)	
6. ISSUED BY AFGHANISTAN ENGINEER DISTRICT US ARMY CORPS OF ENGINEERS KABUL APO AE 09356		CODE W917PM		7. ADMINISTERED BY (If other than item 6) See Item 6		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				X		9A. AMENDMENT OF SOLICITATION NO. W917PM-09-R-0002	
				X		9B. DATED (SEE ITEM 11) 20-Oct-2008	
						10A. MOD. OF CONTRACT/ORDER NO.	
						10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).							
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
D. OTHER (Specify type of modification and authority)							
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) ANA, Training Range, Lashkar Gah, Afghanistan Delete Section 00010, Proposal Schedule and Section 01010, Scope of Work in their entirety and replace with the attached Section 00010, Proposal Schedule and Section 01010, Scope of Work. THE REVISED COST/PRICE PROPOSAL DUE DATE REMAINS UNCHANGED AT 1700, 25 NOV 2008. CHANGES TO Section 00120, Proposal of Evaluation and Basis of Award - The value of the projects to be submitted as mentioned on paragraph 5, Evaluation of the Technical Proposal; a. FACTOR 1: EXPERIENCE, will be changed from \$6,000,000.00 to \$2,000,000.00. ALL OTHER TERMS AND CONDITION REMAIN UNCHANGED. Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				TEL: _____ EMAIL: _____			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)				BY _____ (Signature of Contracting Officer)		06-Nov-2008	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION 00010 - SOLICITATION CONTRACT FORM

The following have been modified:

SCHEDULE PROPOSAL**SECTION 00010****PROPOSAL SCHEDULE – Lashkar Gah Range**

The Contractor shall provide a price for all items, including those labeled, "Optional Items." The Government will evaluate the Contractor's entire proposal to determine which CLINs represent the best value to the Government.

No.	Description	Qty	Unit	Unit Price	Total Amount
0001 Base Proposal:					
0001 DESIGN:					
0001A	Design Costs:	1	LS		\$_____
0002	Mobilization Costs	1	LS		\$_____
0003	De-Mobilization Costs	1	LS		\$_____
0004	Preparation of As Builts	1	LS		\$_____
0005 SITE IMPROVEMENTS:					
0005A	Demolition & Site Grading	1	LS		\$_____
0005B	Rifle Range	1	LS		\$_____
0005C	Pistol Range	1	LS		\$_____
0005D	Heavy Machine Gun Range	1	LS		\$_____
0005E	RPG/SPG Range	1	LS		\$_____
0005F	Mortar Range	1	LS		\$_____
0005G	Hand Grenade Familiarization Range	1	LS		\$_____
0005H	Fire and Movement Range	1	LS		\$_____

0005I Urban Assault Course	1	LS	\$_____	
0005J UXO Demolition Area	1	LS	\$_____	
0005K Gravel Roads, sidewalks, parking	20,000	M ²	\$_____	\$_____
0005L Site Electrical Distribution System	1	LS	\$_____	
0005M Non-potable Water System	1	LS	\$_____	
0005N Sewer Collection System	1	LS	\$_____	
0005O Fencing and Entrance Gate	10,800	M	\$_____	\$_____
0005P Covered Bleachers	8	EA	\$_____	\$_____
Sub-Total Site Improvements only			\$_____	
0006 BUILDINGS:				
0006A Permanent Latrine Facility	3	LS	\$_____	
0006B Weapon Breakdown/Ammunition Dist Bldg	8	LS		
\$_____				
0006C Covered Mess	8	EA	\$_____	\$_____
0006D Observation Tower	8	EA	\$_____	\$_____
0006E Security Detail Office Building	1	LS	\$_____	
0006F Guard Shack	1	LS	\$_____	
0006G Utility & Storage Building	1	LS	\$_____	
0006H Trash Point	1	LS	\$_____	
Sub-Total Buildings only			\$_____	
0007 DBA INSURANCE:				
0007A DBA Insurance	1	LS	\$_____	

TOTAL BASE PROPOSAL ITEMS

\$ _____

(total of all above costs - includes design and construction)

0008 OPTIONS

0008A Classroom	1	LS	\$ _____
0008B Lighting on roads and range areas	1	LS	\$ _____
0008C Gravel Access Roads	37,000	M ²	\$ _____ \$ _____
0008D Gravel Range Perimeter Roads	50,000	M ²	\$ _____ \$ _____
0008E Chlorination System	1	LS	\$ _____
0008F Electrical Utility Connection to ANA Base	1	LS	
			\$ _____

TOTAL OPTION PROPOSAL ITEMS

\$ _____

TOTAL BASE and OPTION PROPOSAL ITEMS

\$ _____

PROPOSAL SCHEDULE NOTES

1. Offeror shall submit prices on all items.
2. Only one contract for the entire schedule will be awarded under this solicitation. This project will be awarded as a lump sum contract. This Proposal Schedule is an accounting tool for allocating funds to applicable budget.
3. Costs associated with this project shall include design and construction costs for site, facilities and utilities preparation but, no less than all items as shown in proposal schedule.
4. DESIGN COSTS DEFINITION: Design costs shall consist of preparation of master planning and site designs, plans, drawings, and specifications.
5. NON-DESIGN COSTS DEFINITION: Non-design costs shall include the following: initial site visits; field, topographic, property, boundary, utility, and right-of-way surveys; subsurface explorations and borings; feasibility, functional, and economic studies and other investigations; flow gauging and model testing; preparation or verification of as-built drawings; preparation of general and development criteria; preparation of general and feature design memoranda; services of consultants where not specifically applied to the preparation of working drawings or specifications; construction phase services; models, renderings, or photographs of completed designs; reproduction of designs for review purposes; and travel and per diem allowances in connection with the above excludable services.
6. SEPARATION OF WORK: All work for Design and Construction shall be included in all Proposal Items.
7. EVALUATION OF OPTIONS: The award will be made to the offeror whose proposal represents the best overall value to the Government. For pricing purposes the Government will evaluate both the Base Proposals and Option Proposals. The Government is not obligated to exercise the options.
8. EXERCISE OF OPTIONAL BID ITEMS: Optional bid items (if any) may, at the option of the Government, be added to the contract at any time within 90 calendar days after award of Base Proposal.

--END OF SECTION--

SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

The following have been added by full text:

SECTION 01010

SECTION 01010

SCOPE OF WORK

1.0 GENERAL

1.1 The project consists of design and construction of one range complex with 8 new ranges, and related roads and support facilities for the Afghanistan National Army at Camp Shorabak Afghanistan. Contractor shall use Government furnished 90% designs provided in Appendices A through U to complete design and construction documents and construct these facilities. The standard designs for the Bleachers, Latrine, Open Mess, and the Observation Tower will be provided on a separate CD.

1.1.1 The project is defined as design, material, labor, and equipment to construct the following buildings, parking, utilities, and other infrastructure: observation towers, covered mess areas, water well with pumping station and non-potable water system with non-potable water storage tank, latrine facilities with sewer collection system, graveled road, sidewalks and parking, classroom, weapon breakdown and ammo distribution building, security detail office building, utility storage building, covered bleachers, guard shack, and optional lighting and fencing to control and protect range support facilities.

1.1.2 Additional overall requirements include earthwork to build erosion control structures, construct and mark berms, and provide electric power. The contractor shall provide and install targets for all ranges. The contractor shall fill and grade the pistol, rifle, and machine gun ranges. The grading for the full area of the pistol, rifle, and machine gun ranges, and backstop berm construction shall be completed only after the final phase of the demining is completed. The contractor shall construct all the berms and areas to be filled with material located onsite.

1.1.3 The Contractor shall indicate in design any proposed areas for future expansion.

1.1.4 Design and construct site grading including drainage structures within the marked area demined, approximately 2 kilometers by 110 meters. Once the demining contractor has cleared the additional full areas for the pistol, rifle and machine gun ranges, the construction contractor may grade the full area of the ranges. All demining work should be completed in February 2009.

1.1.5 Contractor shall plan to run utilities from 5 meters beyond the edge of roadway for an average of 60 meters for each new building. Ties to existing buildings shall be closer to existing connections. Exact distances shall be verified by Contractor during design.

1.1.6 Include demolition of any existing facilities or related man made features and debris that interfere with work under the project, or which would create a hazard or interfere with the completion of this portion of the work

1.1.7 Existing Utilities that are located in the footprint of new buildings shall be relocated to route around the buildings.

1.1.8 For clarity in this document, unless a specific industry standard is specified, United States of America design, construction and material standards shall be used.

1.1.9 Work within this contract shall meet and be constructed in accordance with current U.S. design and International Building Codes (IBC), Life Safety Codes (NFPA-101), and Force Protection and security standards. A partial listing of references is:

IBC, International Building Codes 2003
NFPA 101, Life Safety Codes
UFC 4-010-01, DoD Minimum Anti-Terrorism Standards for Buildings.

1.2 ENGLISH LANGUAGE REQUIREMENT

All information shall be presented in English. The Contractor shall have a minimum of one English-speaking representative to communicate with the COR at all times when work is in progress.

1.3 SUBMITTALS

Submittals and a Submittal Register are required as specified in Section 01335 of the Basic Contract.

1.4 CQM TRAINING REQUIREMENT

Before project design and construction begin, the Contractor's Quality Control Manager is required to have completed the U.S. Army Corps of Engineers CQM course, or equivalent. The Construction Trades Training Center (CTTC) in Jalalabad, Afghanistan provides a course that satisfies the requirement. Courses are offered at regular intervals. For enrollment and course information, contact Reed B. Freeman at the following:

Reed B. Freeman, PhD, PE
Quality Assurance Branch
Afghanistan Engineer District, USACE
Email: ree.b.freeman@usace.army.mil
Telephone: 079-760-4396

A copy of the course completion certificate shall be included in the Design Analysis submittal.

2.0 LOCATION

ANA Brigade Training Area Site Locations by Coordinates. Refer to maps with coordinates in Appendix I. The site latitude and longitude coordinates are provided in the rights of Entry for Each Range Complex.

Proposed Range Complex Area Coordinates for 205th 3rd Brigade (Lashkar Gah)

41R PR 11996 26600
41R PR 11996 30000
41R PR 10000 33000
41R PR 01000 33000
41R PR 01000 26600

3.0 UNEXPLODED ORDNANCE (UXO) REMOVAL AND CLEARANCE

Demining and clearance will be performed by other firms in a phased sequence. After demining the UNMACA Certificates will be provided to contractor which will have the coordinates of cleared area. It is the responsibility of the Contractor to be aware of the risk of encountering UXO or mines and to take all actions necessary to assure a safe work area to perform the requirements of this contract. The Contractor assumes the risk of any and all personal injury, property damage or other liability arising out of or resulting from any Contractor action taken hereunder. The Contractor and its subcontractors may not handle, work with, move, transport, render safe, or disarm any UXO or mine, unless they have appropriate accreditations from the UNMACA MAC.

If a UXO or mine is encountered after a MAC-approved clearance certificate is provided to the Government, UXO or mine disposal shall be handled in accordance with Section 01015, Technical Requirements.

4.0 SUMMARY OF WORK

4.1 CONTRACTOR REQUIREMENTS

The contractor shall design and construct the facilities as a design-built contract and shall be in accordance with the requirements stated in Section 01015: Technical Requirements. Refer to attached appendices and standard drawings for more specifics for required spaces. Design and construction work shall include but not be limited to that shown within attached tables and described below.

4.1.1 General Requirements for Facilities

All requirements set forth in the Section 01010 Scope of Work, but not included in the Section 01015 Technical Requirements, shall be considered as set forth in both, and vice versa. Provide heating for all indoor facilities unless otherwise stated in sections 1010 or 1015. All toilets shall be eastern style. All eastern-style toilets shall face North or South.

All standard construction amenities and details such as heating, lighting, site drainage, utility connections, etc. shall be implied as a design and construction requirement. Drawings referenced are contained in Section 01015 or Appendices. Gravel walkways shall connect all buildings, facilities, and features such as parking lots, generator pads, etc.

In general, this project consists of designing and constructing of the following:

4.1.2 Base Bid Infrastructure

Observation Tower with safety flagpole at each range (8 per range complex)--- The observation tower will measure 4.8m², stand approximately 7m high, and be located approximately 15m behind the firing line in the center of each range. Provide appropriately sized power for intended load capacity. See Appendix A and standard design CD.

Ammunition Distribution Building (1 at each range complex). At each live fire range, design and construct a 3.8m x 6.1m structure on a reinforced concrete pad consisting of a 3m x 3.6m ammunition room and a 3.1m x 3.8m covered patio area. The ammunition room shall be constructed of reinforced CMU block walls with a continuous bond beam and have one steel entry door and two service windows with steel shutters. One service window shall face the patio area and the other shall open on the opposite side away from the patio.

Covered Mess at each range (8 per range complex). The structure provides an area for troop messing at the range site. This facility is also used as a weapons cleaning area by troops using the range. The covered facility has a concrete floor and a standing seam metal roof supported on columns and wood framing system. Sides will be left open. Stand-up eating tables and serving tables will be provided by contractor. Provide appropriately sized power and lighting for intended load capacity.

Security Detail Office Building: Security Detail Office Building large enough for 20 personnel. Provide appropriately sized HVAC and power for intended load capacity.

Guard Shack: Guard Shack large enough for 3-4 personnel and equipment at the entrance to the range complex. Provide appropriately sized HVAC and power for intended load capacity.

Utility Storage Building: Utility Storage Building with site power generator and fuel storage tank. The fuel storage tank shall have capacity for 1 week's at full operation. The site shall be secured. The building will be a minimum size of 8mx8m, and located near the other range support buildings.

Water Well-- Water well, water pump and water storage & treatment (20,000 liters) for washing (no showers), latrine and cleaning.

Permanent latrine facilities—Permanent latrine facilities with 10 eastern toilets with hose bibs, and at least one outside fresh water and weather proof spigot. Provide 3 latrines for the range complex along the rear of the range complex.

Covered bleachers--- Covered bleachers, one per range, capable of containing 50 personnel at one time, facing down range behind the observation tower, offset left or right.

Sanitary and Septic system-- Design and construct sewer lines, septic tank, and absorption field. A soil investigation will be necessary to determine size and depth of absorption field.

Parking Area--Graded aggregate base material vehicle parking lot 50m x 50m, placed between the classroom and the nearest ammunition distribution building.

Entrance Road--Graded gravel road from the entrance of the range to the last (8th) range, estimated 17,500 SM.

Fencing-- Fencing around range complex (minimum length required to control and protect range support facilities);

Erosion control structures (drainage ditches, pipe culverts, washes, and small bridges as required).

Additional Overall Requirements

The firing lines for the machine gun range shall consist of a 1.25m high berm with a 2m plateau on top that is centered on and extend along the entire length of the zero meter line. The side of the berm shall be cut at a 1:2 slope with walk-in fighting positions so the front end of the fighting position is at the zero meter line. One meter wide steps made of concrete, mortared rock or timbers shall be placed into the side of the berm centered on the right firing lane limit of odd numbered lanes.

Boundary markers will be placed on each range to mark right and left limits.

Dirt berms will be constructed as backstops, as needed.

4.1.3 Base Bid - Design, layout, and construct the following training ranges

- One (1) Rifle Range: 25 shooting lanes (3m between firing positions) using the “300 meter known distance Range, with 25 KD 120 targets with bang board” as a general model in the Army’s range manual, TC 25-8 (need 3m between positions). Contractor shall clear; level and grade smooth the range site. Dig out target line to keep level with firing positions (see side view of target line- attachment). Construct concrete retaining walls at the excavated target line. A dirt berm will be constructed as the “back-stop” of the range. Approximate range area: 75m (width) x 300m (length).

- o Number of targets, and distance from firing points. 25, on target line, see Appendix J.
- o Type of targets will be the rail system. See Appendix J.
- o Firing points will be as laid out on range plan. See Appendix N.
- o In front of each target there will be a 50 mm x 100 mm slot to insert a target on a stick.

- One (1) Pistol Range: 5 shooting lanes (8m between firing positions) using the “Combat Pistol Qualification Course” as a model in the Army’s range manual, TC 25-8. Firing position markers will also be placed every 2m (a total of 22/23) to accommodate for alternate range configuration when needed. PVC target stands (request no concrete foundation), for the 22/23-position configuration, shall be placed at 10 meters and 25 meters. Contractor shall clear, level and grade smooth the range site. A dirt berm will be constructed as the “back-stop” of the range. Approximate range area: 45m (width) x 80m (length). Boundary markers will be placed on each range to mark right and left limits.

- One (1) Heavy Machine Gun Range: 5 firing positions using the “Automated Sniper Field Fire Range” as an approximation in the Army’s range manual, TC 25-8. Targets will be placed by ANA personnel. Contractor shall clear; level and grade smooth the range site. A dirt berm will be constructed as the “back-stop” of the range. Range area: Width = as small an area as possible (area may “fan out” from firing positions to targetry to minimize range firing position “footprint”); Length = 1,000m. Boundary markers will be placed on each range to mark right and left limits. The firing lines shall consist of a 1.25m high berm with a 2m plateau on top which is centered on the zero meter line.

- One (1) RPG/SPG Range: Five (5), 10-meter wide firing positions. Targets will be placed by ANA personnel. Soil berms will separate firing lanes. A soil berm will also be constructed as the “back-stop” of the range. Approximate range area: 50m (width) x 1000m (length). The soil berm width will also need to be accounted for in total range width. Boundary markers will be placed on each range to mark right and left limits.

- One (1) Mortar Range: Five (5) firing position mortar range. Targets will be placed in the impact area by ANA personnel. Range area: Width = based on safety evaluation (area may “fan out” from firing positions to targets to minimize range “footprint”); Length = approximately 2,000m.

- One (1) Hand Grenade Familiarization Range: Four (4) throwing bays using the “Hand Grenade Familiarization Range” as a model in the Army’s range manual, TC 25-8. Targets will be placed by ANA personnel. Approximate range area: 100m (width) x 50m (length). Boundary markers will be placed on each range to mark right and left limits

- One (1) Fire and Movement Range: Two (2) movement lanes using the “Fire and Movement Range” (Figure D-29) as a model in the U.S. Army’s Range Manual, TC 2-8. Targets will be placed by ANA personnel. Approximate range area: 150m x 150m. Boundary markers will be placed on each range to mark right and left limits

- One (1) Urban Combat Area: Three lane course using the “Urban Assault Course” (Figure D-21) model in the U.S. Army’s Range Manual, TC 2-8. Do not construct Stations 4 and 5. Place dirt berm 75m behind, and perpendicular to, the 4 dirt berms that make up the course lanes. This dirt berm will run the width of the entire course, and will extend at least 10m past the 2 dirt berms that mark the left and right perimeters of the course. Targets will be placed by ANA personnel. One dirt berm will also be constructed as the “back-stop” (perpendicular to the firing lane berms) of the maneuver area. Range Area: Approximately 150m (width) x 200m (length).

- One (1) Un-Exploded Ordnance and Demolition pit or area. This area will be used to dispose of unexploded ordnance (UXO). The area shall be a circular area with a diameter of at least 50 meters and be surrounded with a 5 meter high berm. The pit area shall have one access road into the area through the berm on the down range side. There shall be a missile proof shelter located outside the berm to provide shelter for the soldiers during detonations. See Appendix P for details.

5. Option Items –

5.1.1 Graded gravel main road to the range facilities from the ANA garrison, estimated quantity 37,000 SM.

5.1.2 Graded gravel road from last (8th) range around the perimeter of the range complex, estimated quantity 50,000 SM.

5.1.3 Lighting on roads to ranges, mess areas, latrines, buildings, and towers, and between the fence and road surrounding the entire range complex (Lump Sum quantity).

5.1.4 Provide and install chlorination system to provide non-potable water in accordance with the provisions of Section 1015.

5.1.5 Provide and install electrical utility connection to the Afghanistan National Army Garrison at Camp Shorabak in accordance with the provisions of Section 01015.

5.1.6 Classroom – Provide one concrete masonry unit or 3D Panel building of about 8m X 28m X 3.75 m high. The contractor shall provide the foundation, floor slab, electrical, mechanical, and related items for a functional facility. The building shall have ceiling, floor and wall insulation, interior wall finishes, windows with interior blinds, two interior office/storage areas 3m X 4.2m with a 3 meter ceiling height. Building lighting design shall allow for flexible set up and use of the main room. Provide ceiling fans and electric resistance fan type heating units. The main room shall be provided with a lecture area on one end and shall be designed to accommodate large group training or several small group activities. Provide building with water for janitorial use inside the building. Provide a minimum of two weather proof, freeze-proof hose bibs with concrete slabs outside the building. Protect hose bibs by four bollards. Contractor shall raise two existing communication and one electrical manhole to finished floor level and install new trap-door style covers to provide access.

The structure shall be constructed of reinforced CMU block or 3D Panel. If CMU walls are constructed, the walls shall have a continuous bond beam at the top and vertical reinforcement to meet seismic requirements. The exterior walls shall be finished with stucco, and the interior walls shall be plastered. The contractor shall paint the exterior and interior walls surfaces. The ceiling construction material will be subject to the approval of the COR. Windows shall be insulated pre-finished aluminum with a thermal break frame and sash. All doors shall be commercial solid core exterior grade in metal frames. Hardware shall be heavy duty and match the door use. The floor slab shall be a reinforced concrete slab with a grade beam to meet seismic requirements. Floor foundation and slab shall be designed based on geotechnical investigation by the Contractor. The roof structure shall be steel with metal roofing panels that are continuous from the ridge to the eave. The roof slope shall be at least 4:12.

The main room of the classroom facility shall be capable of holding 50 soldiers seated. Contractor shall provide a lockable office and storage room. The concrete floor shall be sealed or surfaced to protect the surface and to control dust. The general lighting shall be a system of light of which half can be turned off for lecture classes. The lighting over the speaker area shall be controlled separately from the general lighting.

6.0 PROJECT INFRASTRUCTURE REQUIREMENTS

6.1 SITE PLANNING

The Contractor shall prepare a site boundary survey and site plan based on information contained in the Request for Proposal. The development of the master plan will include participation in several design charrettes conducted at the Afghanistan Engineer District Headquarters Office in Kabul. Contractor shall verify all space requirements and code compliance in accordance with sections 1010 and 1015 of this contract. The final layout of the ranges and support facilities will be determined at the design charrette, after the demining is complete for the entire area within the boundary, as well as the range road and surrounding area for the firing pits and support facilities.

The site coordinates of the range firing pits, range road, and range support facilities shall be provided by the COR after the area has been demined by the UXO Contractor. The individual range orientation and siting shall be adjusted during the charettes to ensure safety clearances, and to maintain the safety fans within the ROE (Right Of Entry).

6.2 DEMOLITION AND GRADING

6.2.1 Minor Site Demolition

Minor site demolition is required prior to construction of new work. Grading at the site is required and shall conform to requirements within references herein.

6.2.2 Crushed Stone

Native crushed stone 100 mm thick shall be placed around all buildings, from the building wall or building landscaping out 2m and all areas of anticipated foot or vehicle traffic to reduce erosion and to provide dust control. Graded, aggregate paved walkways shall be installed between buildings and parking areas.

6.3 WATER SYSTEM

6.3.1 Non-potable Water

Design a non-potable Water System (WS), to include a groundwater well protected in an enclosed, heated water well house as a source for water, and to deliver the water, a hydro-pneumatic water storage tank, booster pumps, and underground pipe distribution network system. The WS shall be constructed to deliver a minimum 345-414 kPa (50-60 psi) at a flow rate that is twice the required daily demand. Water use rate shall be based on ANA daily field training camp conditions or approximately 25 gallons per capita day.

6.3.2 Storage Tanks

Non-potable water storage tanks shall provide capacity for a minimum of 100 percent of the required daily demand. The ground storage tank (no elevated tanks) and distribution system shall be designed to provide a minimum 276 kPa (40 psi) at ground level at all points in the delivery system. Minimum pressures of 207 kPa (30 psi) under peak domestic flow conditions can be tolerated in isolated areas, as long as all peak flow requirements in the entire system can be satisfied. Maximum water pressures in distribution mains and service lines shall not exceed 517 kPa (75 psi) at ground elevation. Water demand required for fire fighting and for irrigation and landscaping needs shall not be included in design demand calculations.

6.3.3 Availability

It is acknowledged that water may not be available at the site despite contractor good faith efforts to find it. The Contractor shall drill a minimum of two wells; each well shall be capable of 2,800 gpd, at the site to a minimum depth of 400 feet (122m). If this is done without result, the Contractor will be considered to have fulfilled the terms of the contract and will be entitled to the full price of the contract CLIN for well drilling. However, the Contractor must still furnish all other parts of the water distribution system as described in section 01015 of the specifications.

6.3.4 Dry Wells

Dry wells must be de-commissioned in accordance with ASTM D 5299. The Contractor must submit a written plan for de-commissioning wells.

6.4 SANITARY SEWER SYSTEM

6.4.1 Design & Construction

The sanitary sewer collection and treatment system shall be designed and constructed by the Contractor. The sanitary sewer collection system shall consist of gravity sewer pipe network and accessories such as manholes, cleanouts, and building service connections. Conduct surface terrain (sloping) and a soils investigation necessary to design and construct a septic tank and absorption field.

6.4.2 Population

The sanitary sewer system shall be designed to accommodate the total expected daily training population plus 25% as specified in the Scope of Work and verified by the Contractor. The population is estimated at a Company level strength of 100 men plus a training staff of 12, for a total of 112 men.

6.4.3 Geotechnical

Geotechnical investigation of the proposed sewage treatment site is required and the contractor shall design the sewage treatment system to be compatible with site and soil conditions.

6.4.4 Capacity

System capacity shall be calculated based on a hydraulic waste load equivalent to 80 percent of the water usage rate of 25 gallons or 95L per capita day, or 76L per capita day.

6.4.5 Gravity Collection System

The gravity sewer collection system shall connect to a septic tank absorption field effluent disposal system.

6.4.5.1 Site Survey

The Contractor shall conduct a topographic survey to determine existing site characteristics. The Contractor shall conduct a utility survey to determine the locations of any nearby water lines, wells, sanitary sewers, storm sewers and electrical lines.

6.4.5.2 Percolation Testing

At proposed sites for holding ponds and the absorption field, the Contractor shall perform percolation tests. Percolation testing may be carried out with a shovel, posthole digger, solid auger or other appropriate digging instruments. Percolation tests shall be accomplished uniformly throughout the area where the absorption field is to be located. Percolation tests determine the acceptability of the site and serve as the basis of design for the liquid absorption. Test results for soil will determine the number of minutes required for water to drop a distance of 25mm, and results shall be provided in units of m2/liters/day.

6.4.5.3 Sanitary System Layout

The Contractor shall design a sanitary system layout following requirements of Section 01015 this contract. Pipe, fittings, and connections shall conform to the respective specifications and other requirements as listed in Contract Section 01015 and all its referenced codes.

6.4.6 Septic System Design

The Contractor shall design a septic tank and absorption field system including all tank geometry, hydraulic loading, inlet and outlet configurations, number of compartments and related site preparation and earthwork. Design will be per specifications provided in Section 01015.

6.4.6.1 Location of Central Septic Tank

Septic tank shall be provided and installed underground and positioned at a location easily accessible to pumping trucks. The Contractor shall provide protection for the septic system by ensuring that vehicles, material storage, and future expansion shall be kept away from the area. Signage or other prevention methods (i.e. pipe bollards) shall be used to provide this protection. The finished grade for the site shall ensure that storm water runoff shall drain away from the site to prevent ponding, inflow, and infiltration

6.4.6.2 Septic Tank & Absorption Field

Design covers a septic tank & absorption field. However, if available real estate constrains construction of this facility, other engineering solutions shall be brought to the Contracting Officer for consideration and approval.

6.5 SITE ELECTRICAL DISTRIBUTION SYSTEM

The contractor shall design an electrical power system to supply and distribute power (to include back-up generation with fuel storage tank, and underground electrical distribution) to all facilities included in the contract to include master planned future facilities. If local electrical distribution system (utility) power is available, the contractor shall provide: 1) a connection to that system to utilize utility power as the prime source for the site; 2) generator(s) with fuel storage to provide a backup source for the site; and 3) an underground electrical distribution system. If local electrical utility power is not available, the contractor shall provide: 1) generators with fuel storage to provide power to the site as the prime source; and 2) an underground electrical distribution system. For details of the electrical power system see Section 01015: TECHNICAL REQUIREMENTS.

All electrical design and installation shall meet NEC (NFPA 70) requirements. Electrical receptacles shall be provided as indicated. Conductors and circuits shall be sized for the specific loads. Primary voltage shall be 220/380 V, 50 hertz.

The contractor shall provide all necessary materials and equipment including temporary power, as required, to provide power to the new classroom, weapon breakdown/ammo distribution building, security detail office building, guard shack, observation towers, covered mess areas, security perimeter, roads, parking areas, other common areas, and latrines.

If the local electrical distribution system is used, contractor shall be responsible for step down transformer and grounding from the closest distribution line.

6.6 LIGHTING (OPTION)

General lighting shall be provided as indicated (length of road, covered mess, tower, generator bldg, latrines, offices areas, and to the 50 M line) and shall meet recommendations from IESNA for each building type and function within each building. Design and installation shall meet NEC 70 requirements.

Exterior lighting shall be high intensity discharge luminaries on 10 meter high minimum galvanized steel poles.

6.7 ROAD NETWORK, SIDEWALK, AND PARKING

6.7.1 Design & Construction

The Contractor shall design and construct the entire road and parking network. The roads shall be designed to carry traffic of up to a 7 ton, three-axle vehicle. A storm drainage system shall also be included. The road layout shall provide access to range facilities to include observation towers and covered mess areas, classroom, ammunition breakout building, utility & storage building, security detail office building, guard shack, water well, pump house, and water tank, septic tank, and trash collection point. Provide parking areas for vehicles for the following facilities at the compound: Control towers, covered mess areas, well pumping station and storage tank, latrine facilities, classroom, weapon breakdown and ammo distribution building, and rear areas of individual ranges.

6.7.2 Technical Requirements

Road design shall be designed per Section 01015, Technical Requirements. Roadways and sidewalks are required as shown in Appendix L and shall be designed and constructed based upon recommendations from geotechnical analysis required herein.

6.7.3 Project Requirements

Design and construct approximately 11.5 km of 9m-wide roadway connecting the ANA Garrison Camp Shorabak to its range complex. Roads shall also be provided to connect the ranges and encircle the range complexes. The road from the main base to the range complex shall consist of a sub-base to be scarified, reshaped and compacted before placing the top layer, then a 200mm aggregate surface course with a 3% slope off the crown for drainage. The roads within the range complex shall require only a 150mm aggregate surface course. New roads shall include drains and grading as required. See Appendix L.

6.8 TRASH POINT

The Contractor shall design, in a location convenient for easy removal, a trash collection point. It shall be located near the range mess area. The trash point shall be a 1.8 m x 1.8 m concrete pad with a minimum 100mm thickness and with a 1.8 meter tall chain link fence around the perimeter. One side shall have a 1.2 m wide gate entrance. Trash Point shall have a metal roof covering.

6.9 HVAC, HEATING VENTILATION AIR CONDITIONING

Environmental control of the facilities shall be achieved by HVAC equipment proposed by the contractor and approved by the U.S. Government. See section 01015 for scope of work required.

6.10 LIFE SAFETY

Design and Construct circulation pathways and exit stairs in accordance with building code references herein. Fire sprinkler system is not required. The facility shall comply with all other safety requirements as required within references. Smoke detectors and fire alarm systems shall be installed in accordance with requirements herein.

6.11 FENCING AND BARRICADES

Fencing shall consist of the types shown or described herein. Barricades shall be as shown. Refer to drawings for required types and locations. Barricades are not intended to resist a certain horizontal load and are not required to be permanently anchored to ground.

6.12 FOUNDATION DESIGN

Foundations, including sub grade, shall be designed and constructed based on recommendations from the geotechnical investigation required herein.

7.0 COMPLETION OF WORK

All work required under this contract shall be completed within 365 calendar days including government review time from Notice to Proceed for site work. Site work construction will not be allowed to proceed until demining is complete. Liquidated damages in the amount of \$1976.65 shall be assessed for every calendar day beyond the scheduled contract completion date and charged to the Contractor.

8.0 SPARE PARTS

Contractor shall provide a list of spare parts to COR for approval.

9.0 REFERENCES

Refer to Section 01015 for required references.

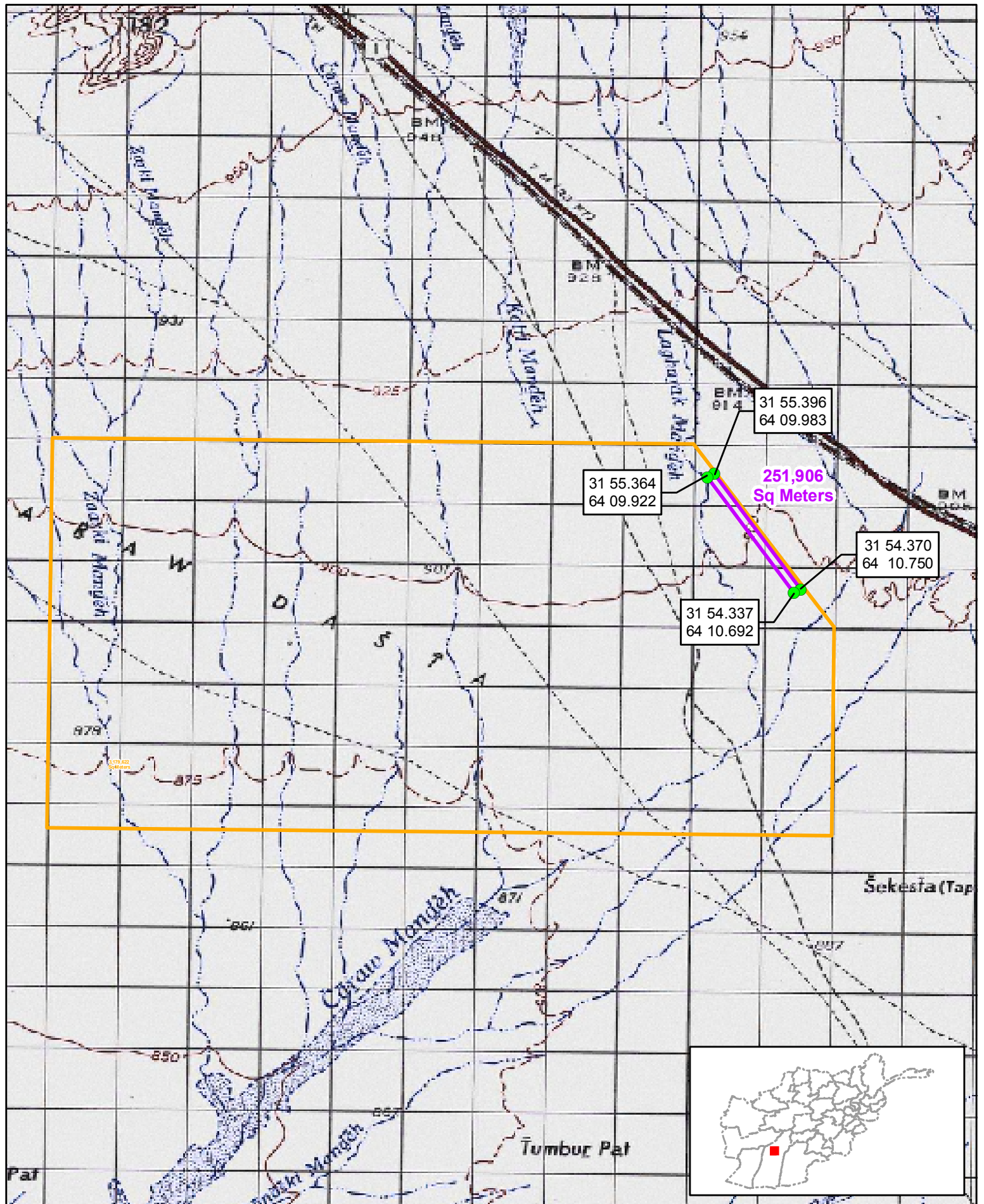
☐ End of Section –

Appendices

Appendix A- Observation Tower
Appendix B- Covered Mess
Appendix C- Modified Qualifying Pistol Range
Appendix D- Layouts
Appendix E- Modified Automatic Weapons Range
Appendix F- Classroom
Appendix G- Throwing Bay
Appendix H- Target Photos
Appendix I- Lashkar Gah Topography
Appendix J- Target Line Dugout
Appendix K- Latrine
Appendix L- Road Cross Section Drawing
Appendix M- Zero Surface Danger Zone
Appendix N- Range Layout Presentation
Appendix O- Shooting Range Plan Layout
Appendix P- UAC Surface Danger Zone
Appendix Q- QCS Certificate
Appendix R- KDR 120_96
Appendix S- KD Target flyer
Appendix T- Range Clearance by Others
Appendix U- Guard Shack

(End of Summary of Changes)

HELMAND FIRING RANGE



UNCLASSIFIED - FOR OFFICIAL USE ONLY

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MAZERI-E-SHARIF, AFGHANISTAN	KEY PLAN
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